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Synchronous movements of upper Eye lid
and lower jaw.

Siméon Snell





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Showing Ptosis when jaw is at rest.



Mr. SNELL'S CASE of Synchronous Movement of upper eyelid and lower jaw.

Showing elevation of left upper eyelid when jaw is depressed and turned to right.

SYNCHRONOUS MOVEMENTS OF UPPER EYELID AND LOWER JAW.

BY

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John Redman, a labourer, aged 17, came to me in December, 1892. He sought advice because of his attention having been directed to the condition to be now described. About thirteen months before he first became aware that the left upper eyelid worked up and down, whilst he was eating. This was at first observed by a friend, who mentioned it to him. He is not himself conscious of any movements except from seeing them in the looking-glass. He assigns no cause for the condition except that shortly before his friend noticed the lid-movements, he had been "caught" in the corner of the eyelid, and the lid had been rendered "black" for a week; but the injury appears to have been very trifling, and has, there can be no doubt, no relation to the affection. He says that he noticed, about the same time as he did the lid movements, that there was some drooping of the eyelid, but there is no question that the slight ptosis and the lid movements have been existent throughout his life. He has never noticed anything wrong with the right eye.

He has a good family history, and has always enjoyed excellent health. There has not been any member of his family as far as he knows who has been afflicted with ptosis or other eye trouble. His condition has not altered since it first attracted his attention. There is now slight ptosis of the left side. It is sufficient to be noticed on looking direct at the patient. The left upper lid comes distinctly over the edge of the pupil; on the right it covers none of it. The curious point to note, however, is that the movements of the left upper eyelid are associated with the motions of the lower jaw. Thus on moving the jaw to the right, and using the left external pterygoid, the left eyelid is distinctly jerked upwards to as much as from $\frac{1}{8}$ to $\frac{1}{4}$ of an inch, and it drops again as soon as the jaw is brought back again to left. On opening the mouth the same thing happens: on closing it the lid drops. In ordinary talking the movement is not noticed. On protruding the jaw, the same phenomena occur. The action of the upper eyelid is most marked, however, on turning the eyes downwards, and then whilst they are thus directed, moving the jaw to the right; the left upper eyelid is seen then to be very distinctly drawn up and exposes the white sclerotic above the cornea, the right lid meanwhile remaining quite steadily covering its eyeball. When the

eyelid is thus upraised, and the other (right) is still further lowered over the eye by casting the gaze more downwards, it (the left eyelid) makes no attempt at following the movement of its fellow, but remains fixedly drawn up.

The ocular movements are good, and there is no history of diplopia at any time. The left pupil is somewhat smaller than the right; the former in medium illumination measuring 5 mm., and the latter 6 mm.; the reflexes to light and accommodation are good.

Another point to notice is that there is a want of symmetry between the two sides of the face; the left strikes one easily as being the smaller of the two; but there is no deformity besides this. On measuring the left upper eyelid it is found also to measure nearly a $\frac{1}{4}$ inch less across than the right.

Vision is normal in both eyes. There is no increased perspiration of the face.

A case similar to the one just related was shown by Mr. Gunn before the Ophthalmological Society some years ago.* I was present and remember the case well. The points of agreement in our cases are most striking. His case implicated the left upper eyelid and so does mine, and throughout, the phenomena which have been detailed find close accord with those mentioned by Mr. Gunn as being met with in his case. The likeness is maintained not only to the associated lid and jaw movements, but also to the presence of a smaller pupil on the left side and also the want of symmetry of the two sides of the face, the left being in both cases the smaller. Mr. Gunn's was a girl aged 15, and mine is a youth aged 17. In both there can hardly be a doubt that the condition was congenital. I may recall the fact that a committee, consisting of Dr. Gowers, Dr. Stephen Mackenzie, Mr. Lang and Dr. Abercrombie, was appointed to examine Mr. Gunn's case, and they made a report which is published with it in the Transactions of the Society. Except the smaller state of the pupil on the left side they remark on the absence of any indication of defect of the sympathetic. The same may be said of my case. The essential part of the report I reproduce here. "The prominent fact of the case is that the levator contracts when the external pterygoid is put in action, while the latter does not contract when the levator is put in action. There must be an abnormal connec-

* Trans., 1883, p. 263.

tion between central mechanism for the external pterygoid and the levator muscle. The simplest explanation is that the levator is innervated both from the nucleus of the third nerve and from the external pterygoid portion of the nucleus of the fifth nerve. Thus we can understand both the action of the levator on association with the external pterygoid and the lower position of the eyelid at rest and on movement of the eye. The fact that the levator does not relax perfectly when the eyelids are closed may perhaps be accounted for by its partial innervation from the fifth nucleus." They further say that "the difference in the movements of the two sides of the face appears to be due simply to a difference in the connection of the muscles and the skin."

In my case I have no doubt that the want of symmetry was really a want of actual development. This is shown by the smaller width of the left as compared with the right eyelid. I do not remember that this condition is mentioned in other cases.

Mr. Gunn's case, which has been referred to in some detail, was perhaps one of the earliest, if not the very first, that was recorded. There have since then been several others published. Swanzy speaks of fifteen being on record.† Other cases have, however, besides this been observed which will bring the total to a higher figure. Some cases, especially recent ones, of which the records are accessible to me, will be mentioned now. My friend, Mr. Priestley Smith, has very kindly given me a note as to some cases. "Beer, according to a brief abstract in Michel's Year Book,‡ has observed in several patients slight movements of the eyes in association with the protruded tongue. Blok, briefly referred to on the same page, cites thirteen cases in which movement of the upper lid, generally the left, was associated with opening of the mouth, and to these he adds two more observed by himself. Fraenkel, the same page, refers to a case of involuntary raising of the upper lids during mastication."

Ole Bull, in an article in Knapp's Archives of Ophthalmology,§ mentions that in the Transactions of the Ophthalmological Society

† Handbook of Diseases of the Eye, 4th edition, 1892.

‡ 1891, page 380.

§ 1888, page 144.

of Heidelberg, 1887, Professor Helfreich has reported two cases of unilateral paresis of levator palp. sup. in which opening of the mouth produced an involuntary raising of the lid. In one of these cases there was also on the same side paresis of the rect. sup., and vision on the corresponding side was only $\frac{1}{3}$ of that of the other eye. Ole Bull relates a case of his own like this latter one. The movements of the globe were free in every way except upwards. The right side was the one affected. Vision on this side was $\frac{5}{60}$; left $\frac{5}{18}$. Ophthalmoscopically there was nothing abnormal. The eyelid could be voluntarily raised when the unaffected eye was closed. From the discussion which followed the reading of Professor Helfreich's communication it appeared that Fuchs|| and Fraenkel each had seen a case, but no ptosis was present. Nieden stated also that he thought such synchronous movements were not so rare as the reports of them were few.

Whilst Helfreich agrees with the opinion expressed by Dr. Gowers and the Committee in Gunn's case, Ole Bull thinks from his own case that "it is quite as rational to explain the concomitant action of the muscles in question as synchronous, such as Drs. Rosenmeyer and Nieden have done. In the cases where ptosis is present, the patients have, because of the paralysis of the levator (and rect. sup.), no inducement to check synergetic movement raising the lid on the affected side. The synergy in action of the muscles of the maxilla is very common, and is easily proved by the well-known fact that many people, especially children, raise the upper lids when gaping." In this connection may be mentioned Beaumont's interesting case, which will be referred to further on. Also it is well known that children with closed eyes from intolerance of light often open the mouth whenever they endeavour to open the eyes.

Ole Bull records a second case:¶ the left side was affected; the ptosis was marked and covered $\frac{3}{4}$ of the cornea; the rect. sup. was also paretic on the affected side. Hubbell, in the first

|| No mention of such a case is made in his Text Book of Ophthalmology, American Translation, 1893.

¶ Archives of Ophthal., 1892, page 354.

number of the Archives of Ophthalmology for the present year,* relates the case of a boy, aged 7, with "symmetrical and well-shaped head and face." The right eye was closed from birth, except with movements of the jaw. "When the mouth is closed the right eyelids are also closed, and there is not the slightest movement of the upper lid when the eyes are ordinarily opened;" "when, however, the mouth is opened the right upper eyelid is involuntarily and unconsciously raised at once." The eye cannot be turned upwards beyond the median plane, nor inwards, but little beyond the vertical plane, the superior rectus and inner rectus being thus paretic; the pupil and fundus were normal in all respects. The right eye was, however, amblyopic, and fingers only were counted at four feet; the left was normal. Three excellent illustrations are given with this case.

Dr. Sinclair† has quite recently recorded three cases occurring at the Birmingham Eye Hospital. One was a girl, aged 7, who came "complaining of drooping of the left upper eyelid, and uncontrollable movement thereof when eating." The other instances were in males, aged 34 and 22; in one the ptosis was slight, and in the other marked; in both the left eye was affected.

Mr. W. M. Beaumont, of Bath, has also in a recent number of the Lancet‡ related a case of associated movements of the upper eyelid and lower jaw. It differs a good deal from those already referred to, but a reference to it may be of interest. The patient was a child, aged 2 years and 2 months, suffering from congenital ptosis and epicanthus of both eyes. There was no visible action of the levators, and the upper and lower eyelids were separated from each other by a mere chink; the corneæ could be scarcely seen. When the child attempted to use the eyes he invariably opened his mouth, producing a well-marked idiotic expression. A plastic operation was performed, which neutralised in a great measure the ptosis, and the child no longer went about with his mouth open.

From the foregoing remarks it will be gathered that in the majority of the cases recorded the left is the side affected; that

* January, page 65.

† Ophthalmic Review, March, 1893, page 80.

‡ April 15th, 1893.

the ptosis is congenital, and that in a few also paresis of the upper rectus has been present in addition. In both Gunn's and my case a difference in the size of the pupil is mentioned, and in my own case in particular was observed a want of symmetry on the two sides of the face, the affected eyelid measuring less across than the upper lid on the sound side. Generally it appears that the conclusions of the Committee on Mr. Gunn's case have been accepted as explaining the phenomena met with. Thus far, there has not been a *post-mortem* of such a case reported.

